

PATENT ABSTRACTS OF JAPAN

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(71)Applicant : SANYO ELECTRIC CO LTD

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(54) AIR CYCLE TYPE COOLER

(57)Abstract:

PROBLEM TO BE SOLVED: To efficiently continue operating even if air conditions are changed by connecting an expansion means to a rotary shaft of a motor through a transmission, and controlling a reduction gear ratio of the transmission in response to a torque of the shaft or an input of a motor driving element.

SOLUTION: A scroll fluid machine 3 in the air cycle type cooler 1 has a compressor 8 and an expansion unit 9. The compressor 8 is connected directly to one end of a rotary shaft 54 of a motor 11, and the unit 9 is connected to the other end of the shaft 54 through a continuously variable transmission 126. A sensor 125 for detecting a torque of the shaft 54 is

attached to the shaft 54, and an output of the sensor is input to a controller 124 together with data of an input value (power) of the motor 11. The transmission 126 is controlled so that, if a compression ratio of the compressor 8 is larger than that of the unit 9, a reduction gear ratio of the transmission 126 is reduced while, in its reverse case, the ratio is increased.

